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## Abstract of the Disclosure

Method for producing fatty acid methyl ester, including compounding saturated and unsaturated higher fatty substances from at least one of vegetable and animal with an alkaline solution dissolved in alcohol to form a mixture. The method also includes emulsifying the mixture to reach a chemical balance state in a reaction section, wherein fats are transesterified into fatty acid methyl ester, wherein border surfaces of the mixture are enlarged by dynamic turbulence in the reaction section and the transesterification is performed under pressure, and wherein the pressure is reduced during transesterification. The method further includes after reaching a chemical balance state, separating residues from the fatty acid methyl ester in a phase separation section. Apparatus for producing fatty acid methyl ester.